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Maryland Roadside Tree Care Expert Exam Study Guide

For Exam Domain:

Chapter 10: Tree Identification

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Proper identification of trees is the first step to being able to manage them properly. In order to correctly identify trees in nature it is important to know certain characteristics used in tree identification. Using multiple characteristics and characteristics other than leaves of a tree will help to identify it. This helps when there are no leaves on a tree or they are too high to see properly. Being able to accurately identify trees takes knowledge, experience and practice.

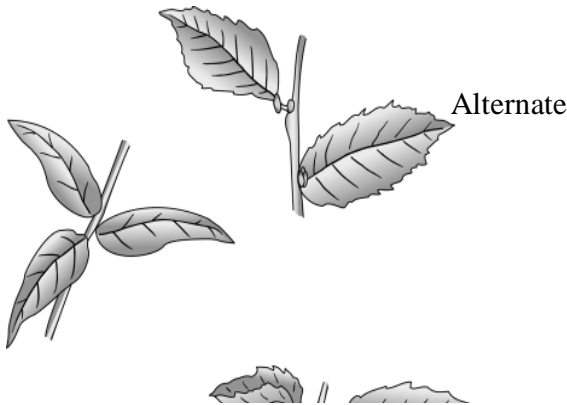
Trees are classified based on biological characteristics. Trees with similar characteristics that are closely related are in the same *genus*. The *species* is the level of classification that identifies a particular tree. A tree's scientific name includes both the genus and the species. This name is the same throughout the world. It is important to know the scientific name because common names vary depending on the local culture. Scientific names are written either underlined or in italics. An example is: *Quercus alba* or white oak.

Tree can be identified from their gross form or shape down to the tiniest leaf scars and vascular tissue arrangement. Some of these characteristics that should be looked at when identifying a tree are:

- Range
- Site condition where the tree is growing
- Bark
- Tree form/branching pattern
- Leaf shape
- Twigs
- Buds
- Bud scars
- Fruit
- Flowers

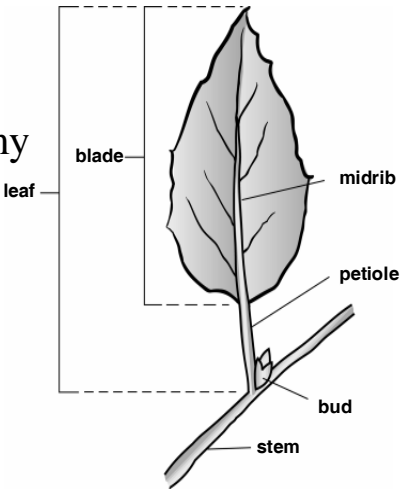
Leaves are the best and often the easiest way to identify a tree. Needles and scales of conifers are also considered leaves. Leaves are arranged on the twig either opposite, alternate or whorled. Some characteristics of the leaf to consider are: the outer edge or margin of the leaf; the pattern of the veins in the leaf; the size; length and color of the petiole or stem.

Whorled

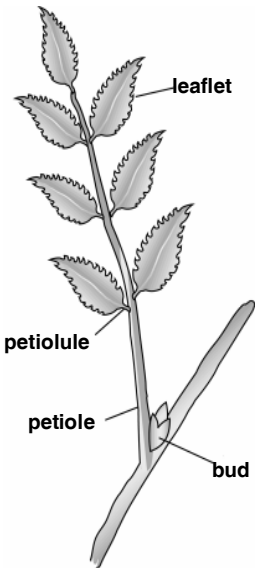


Opposite

Anatomy
of a
Leaf

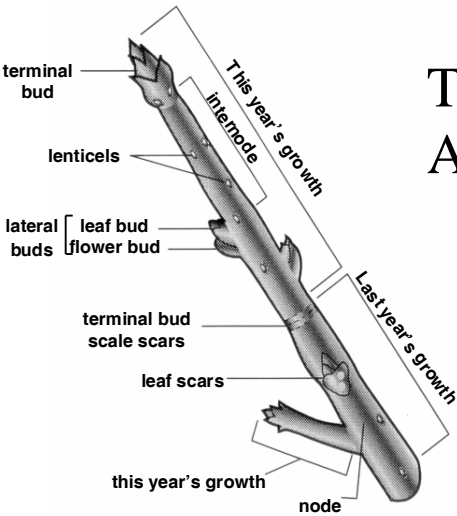


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Twig
Anatomy



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An easy way to remember trees with opposite branching in deciduous trees is the acronym: MAD
CAP HORSE.

M = maple

A = ash

D = dogwood

Cap = Caprifoliaceae (honeysuckles, viburnums)

Horse = horsechestnut, buckeyes

Fruits are the seed containing part of trees. Below are some of the types of fruits:

- Acorns: oaks
- Nuts: hazelnuts; beech nuts
- Cones: pines
- Samaras: maples
- Pomes: apples, pears
- Drupes: cherry
- Legumes: locusts, catalpa

Conifers are identified differently than deciduous trees. In conifers, needles or scales do not fall off in the winter except in a few species like the tamarack or larch. Conifers have either needles like a white pine or scales like a cedar or juniper. Needles occur in three ways on conifers: 1) in clusters of two or more (ex. true pines); 2) in clusters of 10 or more in short lateral shoots (ex. Tamarack or Larch) or 3) solitary along the branch (ex. Spruce, Fir, Hemlock) Cone shape, size, and color can also be used in conifer identification.

In addition to using visual cues to identify trees, other senses are also helpful. From the wintergreen smell of birches, to the whispering sound of pines to the rough feel of slippery elm leaves to the spicy taste of sassafras it is important to use multiple characteristics from multiple parts of the tree to confirm proper identification.

The use of an identification key is helpful in correctly identifying a tree. Keys organize the morphology of tree characteristics usually into a series of choices. Leaf keys are common but there are keys based on flowers, tree shape, buds, etc. Keys are only a guide as each tree is individual and its morphology subject to a variety of genetic, climatic, environmental, biological and cultural influences.

Twenty trees chosen from this list will be on the Roadside Tree Care Expert examination.

Family	Genus	Species	Common Name
Aceraceae	Acer	Negundo	Boxelder
Aceraceae	Acer	Pensylvanicum	Striped Maple
Aceraceae	Acer	Rubrum	Red Maple
Aceraceae	Acer	Saccharum	Sugar Maple
Aquifoliaceae	Ilex	Opaca	American Holly
Betulaceae	Betula	Lutea	Yellow Birch
Betulaceae	Betula	Nigra	River Birch
Betulaceae	Carpinus	Caroliniana	American hornbeam
Betulaceae	Ostrya	Virginiana	Eastern hophornbeam
Cornaceae	Cornus	Florida	Dogwood
Cupressaceae	Thuja	Occidentalis	Northern White Cedar
Cupressaceae	Juniperus	Virginiana	Eastern Redcedar
Ebenaceae	Diospyros	Virginiana	Persimmon
Ericaceae	Oxydendrum	arboreum	Sourwood
Fagaceae	Fagus	grandifolia	American Beech
Fagaceae	Quercus	alba	White Oak
Fagaceae	Quercus	bicolor	Swamp White Oak
Fagaceae	Quercus	falcata	Southern Red Oak
Fagaceae	Quercus	marilandica	Blackjack Oak
Fagaceae	Quercus	phellos	Willow Oak
Fagaceae	Quercus	prinus	Chestnut Oak
Fagaceae	Quercus	rubra	Northern Red Oak
Fagaceae	Quercus	velutina	Black Oak
Hamamelidaceae	Liquidambar	styraciflua	Sweetgum
Juglandaceae	Carya	ovata	Shagbark Hickory
Juglandaceae	Juglans	nigra	Black Walnut
Lauraceae	Sassafras	albidum	Sassafras
Leguminosae	Cercis	canadensis	Redbud
Leguminosae	Robinia	pseudoacacia	Black Locust
Magnoliaceae	Liriodendron	tulipifera	Yellow Poplar
Magnoliaceae	Magnolia	virginiana	Sweetbay
Nyssaceae	Nyssa	sylvatica	Blackgum
Oleaceae	Fraxinus	americana	White Ash
Oleaceae	Fraxinus	pennsylvanica	Green Ash
Pinaceae	Pinus	rigida	Pitch Pine
Pinaceae	Pinus	strobus	Eastern White Pine
Pinaceae	Pinus	taeda	Loblolly Pine
Pinaceae	Pinus	virginiana	Virginia Pine
Pinaceae	Abies	balsamea	Balsam Fir
Pinaceae	Picea	rubens	Red Spruce
Pinaceae	Taxodium	distichum	Baldcypress

Pinaceae	Tsuga	canadensis	Eastern Hemlock
Platanaceae	Platanus	occidentalis	American Sycamore
Rosaceae	Amelanchier	canadensis	Canadian Serviceberry
Rosaceae	Prunus	serotina	Black Cherry
Salicaceae	Populus	deltoides	Cottonwood
Salicaceae	Populus	grandidentata	Aspen
Salicaceae	Salix	nigra	Black Willow
Tiliaceae	Tilia	americana	Basswood
Ulmaceae	Ulmus	americana	American Elm